

REMARKS

Claims 1-7 and 9-20 are pending in the application. Claims 1, 4, 9, 11, 14, and 17-18 have been amended, and claim 8 has been cancelled. No new matter has been introduced by the amendment.

Claim 18 has been amended to correct a minor inadvertent typographical error. The amendment does not alter the scope of claim 18 in any way whatsoever.

Rejection Under 35 U.S.C. § 102(e)

Claims 1, 3, and 7 have been rejected over Yu. This rejection is believed to overcome in view of the amendment of claim 1 together with the following remarks.

Claim 1, as amended, recites a later high-voltage junction device for over voltage protection of an MOS circuit. The lateral high-voltage junction device includes an MOS gate electrode overlying the substrate region and separated therefrom by a gate oxide layer. The thickness of the gate oxide layer is substantially the same as the gate oxide thickness in the MOS circuit. The applicant respectfully asserts that Yu does not suggest or disclose a lateral high-voltage junction device having the recited relationship between the gate oxide layers in the high-voltage junction device and the protected MOS circuit.

Claims 3 and 7 depend from claim 1 and are believed allowable in view of the amendment and remarks pertaining to claim 1.

Claims 1-2 and 7 have been rejected over Hu et al. This rejection is believed to overcome in view of the amendment of claim 1 together with the following remarks.

Claim 1, as amended, is believed to distinguish over Hu et al. at least because Hu et al. does not suggest to disclose the claim gate oxide relationship.

Claims 2 and 7 are believed allowable in view of their dependence from claim 1.

Claims 1-2, 6, 8-10, and 12-20 have been rejected over Lin et al. This rejection is believed overcome in view of the amendment of claims 1, 9, and 14, together with the following remarks.

The applicant's foregoing remarks regarding claim 1 are incorporated by reference herein. The applicant respectfully asserts that Lin et al. does not suggest or disclose a lateral high-voltage junction device as recited in claim 1.

Claim 9, as amended, recites an input protection circuit that includes an MOS gate electrode overlying the substrate and separated therefrom by gate oxide layer. The gate oxide layer has substantially the same thickness as the gate oxide thickness of the MOS circuit. As set forth above, the applicant respectfully asserts that Lin et al. does not suggest or disclose the claim gate oxide relationship.

The applicant respectfully disagrees with the characterization of Lin et al. at page 4 of the instant Office Action. The portion of Lin et al. cited in the instant office action does not suggest or disclose the applicant's claim limitation that the thicknesses of the gate oxide layers are substantially the same in the input protection circuit and the MOS circuit. The applicant respectfully asserts that the cited section is referring to the difference in oxide thickness, as illustrated by Lin et al. in FIG. 12 F, where a thick gate oxide (65) and a thin gate (67) is shown.

Claims 10 and 12-13 are believed to distinguish over Lin et al. in view of their dependence from claim 1.

Claim 14, as amended, recites a MOSFET for use as a high-voltage handling device that includes a gate electrode overlying a channel region. The gate electrode is positioned, such that opposing sides of the gate overlie the channel region at a point inwardly spaced from the source and drain regions. The applicant respectfully asserts that Lin et al. does not suggest or disclose the claimed MOSFET.

Claims 15-20 are believed allowable in view of their dependence from claim 14.

Claim 17 has been amended to maintain consistency with claim 14 in view of the amendment of claim 14.

Rejection Under 35 U.S.C. § 103(a)

Claims 1 and 5 have been rejected over Lee et al. in view of Iwai et al. This rejection is believed overcome in view of the amendment of claim 1 together with the following remarks.

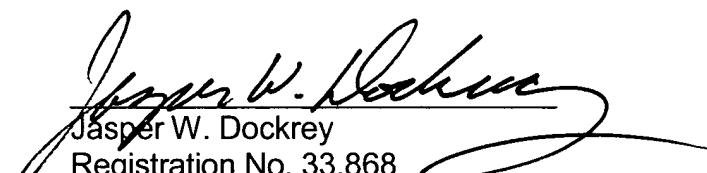
The applicant's foregoing remarks pertaining to claim 1 are incorporated by reference herein. The applicant respectfully asserts that neither Lee et al. nor Iwai et al. suggest or disclose a lateral high-voltage junction device as recited by claim 1.

Allowable Subject Matter

Claims 4 and 11 were objected to as being dependent upon a rejected base claim, but were indicated as allowable if rewritten in independent form to include all limitations of the base claim and any intervening claims. Accordingly, the applicant has amended claims 4 and 11. Claim 4 as amended includes all the limitations of claim 1 from which it formerly depended. Further, claim 11 includes all of the limitations of intervening claim 10 and claim 9 from which it formerly depended. In view of the applicant's amendment of claims 4 and 11 these claims are now believed to be in condition for allowance.

The applicant has made a novel and non-obvious contribution to the art of transistor and circuit design for device components intended to handle high voltages in various kinds of semiconductor circuits. The claims at issue are believed to distinguish over the cited references and to be in condition for allowance. Accordingly, such allowances are now earnestly requested.

Respectfully submitted,



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